IMPACT OF INTERNATIONAL TRADE ON ECONOMIC GROWTH OF AFGHANISTAN

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By

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Introduction

An Overview of Trade in Afghanistan

Like the rest of the world, trade in Afghanistan has a historical background due to its location along the historic Silk Road. Trade is an important part of economic activities and is part of the country's Gross National Product (GNP). It is one of the favorite professions of the people of this ancient region. Throughout history, Afghanistan has been a source of trade, not only in terms of geographical location but also because of civilizations and large and bustling cities. Furthermore, Excavations in Naqada, the oldest Egyptian dynasty (3300 to 3100 BC), show the Egyptians used Badakhshan lapis lazuli in jewelry and sculptures of their places of worship. The lapis lazuli found in the Egyptian Pyramids is the oldest evidence of precious stones trade between Egypt and Afghanistan, dating back to more than 4400 years ago. However, excavations in southern Iraq indicate that from about 2600 to 2500 BC, the lapis lazuli precious stone of the Sarsang mine in Badakhshan was used in the tombs of the kings of the Ur dynasty. Besides, Extensive studies revealed that lapis lazuli precious stone was used in the Middle Eastern kings' jewelry extracted from the Sarsang mine in Badakhshan, deep in the Hindu Kush (Ghobar, 1989).

One of the most important facilities in trade from ancient times to the present day is the existence of trade routes. The Silk Road was one of the oldest land trade routes between China, South Asia, Europe, and Africa through Central Asia, and because Chinese silk and silk fabrics were once traded to other parts of the world through this route, it was known as the Silk Road. The Silk Road, which was inaugurated in 92 A.D, was the most important and largest crossroads for trade caravans between east and west at the time, passing through Afghanistan, Uzbekistan, and Iran and connecting to the western Egyptian city of Alexandria. It is said that this important and strategic road was used during the Han Dynasty of China in the first century BC. The Silk Road can be considered one of the ancient world's greatest and most valuable civil heritages, which connected the Eastern to the Western world. This ancient corridor ended in Beijing, and after a long journey in the city of Balkh and the west coast of Turkey to the ports of Afizos and Militus. Due to Afghanistan’s important geostrategic location, it was located in the middle of this road, and the city of Balkh was the center of the intersection and concentration of the corridor. The Silk Road was the most important indicator and manifested Afghanistan's geo-economic importance in the second century AD and the following centuries. Meanwhile, with great and increasing changes in the political and economic structure of Europe

and Asia and the development of trade and commerce using new routes, especially the development and advancement of shipbuilding, shipping, and the emergence of new sea routes, transportation through The Silk Road gradually declined. Finally, the Silk Road became a sluggish trade route, and its use was reduced to a minimum and later abandoned (Panjsheri, 2004).

Role of trade in economic development

International Trade has many economic, political, cultural, lingual, social, and other dimensions. Therefore, the study fails to bring all aspect and explain it. So, the study points up only the economic aspect of trade in economic development.

International trade and economic development

The economic development of a country is dependent on trade. Exporting commodities flows capital inside the country, and even importing capital goods increase economic development. Besides, Afghanistan's export is mainly agricultural products, while its import contains different commodities and capital goods.

Foreign exchange earnings

Foreign exchange earning proceeds from exporting a country's goods and services and dividends from its international investments in convertible currencies (UNESCWA, n.d.). Moreover, International trade will pave the way to earning foreign exchange for the country. Afghanistan has a wide trade relationship with most countries such as India (Indian rupee), Iran (Iranian Rial), United Arab Emeritus (UAE dirham), United Kingdom (Pound sterling), United States of America (US dollar) and European countries (euro). Moreover, these currencies are in circulation in the foreign exchange markets of Afghanistan.

Market expansion

Afghanistan has experienced the importance of international engagement and access to the regional and international markets in the new economic and political era after 2001. The trade from (1992 to 2001) was massively disrupted in terms of access to international markets because of instability and war. However, traders and business people after 2001 targeted new markets worldwide. Fortunately, recent data shows the extensive cooperation, integration, and engagement between Afghan traders and international firms. Nevertheless, international trade

will lead to market expansion, and today Afghan traders targeted many markets in India, China, Europe, the Middle East, Russia, the US, and neighboring countries. Besides, they can run market research, make plans to enter new markets, run marketing, brand Afghan goods, export, and import capital goods and finished goods to and from different regions and countries of the world.

Increase in investment

Investment is an indicator of wealth growth, allowing you to beat inflation, achieve your financial targets, and stabilize your financial future (Bajajfinserv, n.d.). Foreign trade and investment are inextricably linked. Hence, Trade persuades firms and enterprises to produce more, leading to an increase in investment.

Foreign Direct Investment

Foreign investment refers to the investment by a foreign investor in domestic companies and assets of another country. By inaugurating branches and expanding their investment in other nations, large multinational corporations will seek new opportunities for economic growth. Furthermore, FDI investment in Afghanistan's economy fluctuates; in 2002, the figure stood at 50 million dollars; in 2009, the FDI inflow became 57 million dollars, and in 2018 the investment figure increased to 119 million dollars.

Increase in National Income

Countries trade to satisfy their needs. Hence, a sum of society in a country is gravely in demand of particular goods that are not available within the country; therefore, trade emerges to meet the society's demand. Meanwhile, Import and export change countries' economic state while every country, whether developed or developing, needs trade, and the impact of trade can be defined by the balance of trade of a country (exp-imp=BOT). Thus, a positive change in export means a flow of capital which leads to an increase in national income.

Employment and Poverty Eradication

Generally, trade is considered a source of growth, development, and employment. Trade has grown greatly in recent years due to transportation and technology development and the economy's incremental opening through multilateral, regional, and bilateral trade agreements. Besides, this initiative has led to employment growth in both developed and emerging economies and has helped to raise millions out of poverty (OECD, OECD, n.d.).

Specialization

The main characteristic of export is specialization in specialized labor and producing different products, and a clear example is China, with a huge human capital in different sectors. Besides, trade led to specialization, and specialization directly relates to productivity. Thus, the more the human capital is specialized, the faster the industry grows. Hence, Afghanistan educational institutes' capacity is much less to graduate experts in different fields or to train efficiency, time management, and professionalism to the labor. However, if the domestic industry and production increase, it will lead to specialization in the country.

Import of capital goods and technology

Capital goods and technology are two essential factors to revive the economy in developing and least-developed countries. Further, Afghanistan and other similar countries are mostly consumers. Most of their imports are finished goods, agricultural products, industrial food, and clothes, while capital goods and raw materials are making less portion of the import chart. Further, these countries might use the opportunity and import capital goods and technology to accelerate the speed of growth in their countries.

Role of Trade Institutions

GATT (General Agreement on Tariffs and Trade)

The General Agreement on Tariffs and Trade (GATT) is an official agreement between several countries with the ultimate goal of facilitating foreign trade by reducing or removing barriers to trade, such as tariffs and quotas (General Agreement on Tariffs and Trade, n.d.). Further, the GATT signatory is known as a contracting party (although loosely referred to as a member), With a membership of twenty-three developed countries because GATT is not legally an entity and is regulated as follows; pairs of countries negotiate bilaterally, the main supplier of the negotiating countries was the same. Under the most favorable law of the nation, a key provision of the commercial charter, all compromises were made in the bill's country.
GATT’s values and functionalities are:

- Trade is founded on the non-discrimination principle;
- All states granted each other Most Favored Nation (MFN) status;
- Tariffs should usually give security;
- Multilateralism and free trade should be the basic principle.

In addition to special treatment for developing countries, LDCs, in particular, provide:

- They provide flexibility in the form of a longer transition period to complete most obligations.
- They provide technical assistance to the Least Developed Countries (LDCs) and developing countries.
- The requirement is to ensure that exporters from developed countries obtain more favorable treatment when implementing non-tariff controls (Hesamiazizi, The Role of Foreign Trade on Economic Growth and Development in Indian and Iranian Economies, 2008).

WTO (World Trade Organization)

The GATT (1986-93) Uruguay round gave birth to the World Trade Organization (WTO). In April 1994, the members of the GATT signed the Uruguay round agreement in Morocco to create a new organization called WTO.

On 1 January 1995, it was officially created, replacing GATT as an effective formal organization. Since 1948, GATT has been an informal organization controlling world trade. On the contrary, the WTO is a permanent body created by member countries based on an international treaty. Similar to the IMF and the IBRD, it has gained international status but is not an entity of the United Nations (UNO).

The WTO has almost 153 members, accounting for more than 97% of world trade. The high-level decision-making body of the WTO is the ministerial conferences, which are held at least once every two years; below that is the General council (usually ambassadors and heads of delegations in Geneva, but often officials sent from the capitals of the members) that meets at the headquarter in Geneva several times a year. The Geneva Council also meets as the advisory body on trade policies and the dispute resolution body (Chand, n.d.).

The WTO's significant objectives are:

- To boost the living conditions of individuals in the member countries.
- To ensure full employment and widespread growth in efficient demand.
- To expand production and exchange of goods.
- To promote trade in services.
- To ensure that the usage of world resources is optimal.

- To safeguard the ecosystem.
- To adopt the notion of sustainable growth.

The key WTO functions are discussed below:

- To Implement the rules and provisions relating to a framework for trade policy analysis.
- To provide a forum for member countries to decide on future trade and tariff policies.
- To Provide facilities for the implementation, management, and execution of world trade agreements, both multilateral and bilateral.
- To administer the laws and procedures applicable to the resolution of disputes.
- To ensure that the world's resources are optimally used.
- To assist international organizations such as IMF and the World Bank with establishing coherence in determining universal economic policy.

Literature Review

Li et al. (2010) investigated the relationship between international trade and the economic growth of East China over the period 1981-2008. The cointegration model is used to analyze the long-term association between variables. Further, the Time series error correction model and short-term causality test were applied to find the short-term relationship between total export, total import, and the Gross Domestic Product (GDP) in East China. The result pointed out a long-term and short-term relationship between international trade and economic growth. Moreover, Foreign trade is the growth engine for East China. The study proposed that the government prioritizes these activities: first, the exchange rate should be kept stable. Second, the policies related to industries should be actively revised and implemented. Third, the government should develop policies to perform trade strategically. Fourth, the government should pave the way for people regarding capital support and a suitable and proactive fiscal policy. Finally, protection in today's situation is vital, so it should be realized in the difficult turmoil of the global economy.

Makhmutova and Mustafin (2017) investigated the causal relationship between international trade and the economic growth of the world's biggest economies; China, the United States, and Russia. Undoubtedly, these economies are highly engaged in international trade and are economic superpowers. The study aimed to find the dependence of the abovementioned economies on their international trade. The study tested the influence and role of international trade. It ranked the economies according to the dependence and importance of international trade in the economy of the above four mentioned nations. The paper applied

system analysis, comparative macroeconomic analysis, questionnaires, and ranking methods to find the relationship between variables and rank the countries. The study was based on a survey; therefore, unquestionably, China (51.1%) stood in the first place, followed by Russia (19.6%), the United States of America (12%), and Germany with (3.9%) votes and these percentage show the importance of international trade in the respective countries, answered by responders. Based on the result, the study ranked in the following order: first place in Germany, second place in the USA and China, and Third Place in Russia. The result of the study presented that the German economy is most dependent on international trade. Chinese and American economies have a similar position which continues to grow despite the position in foreign trade. Finally, the Russian economy decreased its dependence on international trade.

Hesamiazizi (2008) conducted a study on the role of foreign trade on economic growth and development in the Indian and Iranian economies. The study attempted to investigate the long-run equilibrium relationship between export and growth and aimed to find the importance of the foreign sector in explaining economic growth. The paper stated that India paved better ground and conditions post-liberalization, but Iran failed to do so. Iran created a better position after the war with a five-year development plan. Furthermore, the study underlined that Iranian export has better condition concerning Indian export in economic growth. The study found that all variables have a long-run positive correlation with economic growth. The error correction model has also indicated that exports have a positive and significant impact on economic growth. However, imports have a negative and insignificant impact on economic growth in India. In the case of Iran, there is a positive and stable long-run relationship between economic growth, import, and export. Like India, Iran's exports have a positive impact on economic growth, but imports have a negative and insignificant impact on economic growth. Finally, the study concluded that there is a unilateral relationship between exports and imports in India and a bilateral relationship between exports and imports in Iran.

Taghavi et al. (2012) attempted to find the relationship between international trade (exports and imports) and economic growth in Iran. The study adopted Vector Autoregression to analyze the impact of exports and imports on the economic growth of Iran. This paper shed light on the percentage of oil and non-oil exports, which showed that (90%) of GDP contribution is made through oil export while only (5.7%) of export makes (up 1.6%) of total GDP through non-oil exports. The normality of the data was tested to see whether the data were normally distributed or not. The findings showed that exports positively and significantly impact economic growth, while imports negatively impact economic growth.

Tapsin (2015) examined the effect of international trade on economic growth in turkey. The study used the Granger causality test to investigate the causal relationship between imports, exports, and gross domestic product. The study found a significant bidirectional relationship between gross domestic product and exports. Likewise, a unidirectional relationship exists between gross domestic product and import, running from GDP to import and import to export. The study suggested that the Turkish government should accelerate the research and development investment to increase the production of intermediate and capital goods, contributing most to the current account deficit.

Dinc et al. (2017) studied the impact of foreign trade on economic growth in seven developing countries, including Iran and Turkey. The study used a panel cointegration method to analyze the correlation between foreign trade and economic growth in particular countries. Ordinary Least Square shows that foreign trade, energy consumption, humanity, and physical resources positively affect economic growth. Furthermore, it should be invested more in human resource stock due to the positive correlation between human resources and economic growth. Moreover, the study suggested that policymakers should properly consider the importance of education in the workforce.

Abhayaratne (1996) investigated the association between export and economic growth in Sri Lanka. Johansen cointegration tests were used to find the cointegration among gross domestic product, export, and import in Sri Lanka. The result indicated that the variables are cointegrated, but international trade did not cause or accelerate the economic growth of Sri Lanka during the period between 1960 – 1992.

Jayachandran and Seilan (2010) discussed the significance of Foreign Direct Investment (FDI) and international trade in accelerating the economic growth of the Indian economy. This study attempts to find the relationship between International Trade, Foreign Direct Investment (FDI), and Gross Domestic Product (GDP). Furthermore, the Granger Causality test is used to analyze the causal relationship among economic growth termed gross domestic product, foreign direct investment, and export measured by actual merchandise export. The paper attempted to prove the correlation between International Trade, Foreign Direct Investment (FDI), and Gross Domestic Product (GDP) using the Cointegration test for a long-term relationship and the Granger Causality test to find the causality between variables. They found a causal relationship between export and growth rates but no causality from foreign direct investment to exports. Finally, there is a unidirectional running from exports to growth rate, and there is no causality from gross domestic product to exports. The foreign direct investment scenario is the same as the export and gross domestic product.

Abubakar and Shehu (2015) carried out the Autoregressive Distributed Lag Model (ARDL) to determine the impact of international trade on the economic growth in India. The model formulated the GDP (Real Gross Domestic Product), imports to GDP ratio, exports to GDP ratio, domestic investment (gross domestic capital formation as a ratio of GDP), inflation, and exchange rate to analyze the impact of international trade on the economic growth of India. The result underpinned the classical and neo-classical theories that see international trade as an engine of economic growth. The study suggested that the government should give opportunities and support for producing exportable goods and services through tax incentives and even provide them with subsidies. Besides, the government should also decrease the export tariffs because exports positively impact India's economic growth. Meanwhile, the government should discourage the importation of consumer goods by imposing restrictions such as quotas and an increase in import tariffs.

*Hussain and Haque (2016***)** examined the short and long-run relationship between gross domestic product per capita growth, foreign direct investment, and international trade using the Johansen method and Error Correction Model (ECM). Error Correction Model (ECM) was employed to find the long-run relationship between variables. The findings presented a relationship between international trade, foreign direct investment, and gross domestic product. Besides, International trade and foreign direct investment significantly contributed to economic growth. The study proposed that the government of Bangladesh should accommodate an investment environment to develop the economy, and also, the government should eliminate the obstacles before capital flows and investments.

Egbetunde and Obamuyi (2018) sought to explore the impact of international trade on economic growth in Nigeria and India. Besides, the study intended to find the causality between real gross domestic product, foreign trade, foreign direct investment, and labor force. The study utilized the Vector Autoregressive Model (VAR) test to analyze the association between international trade and economic growth. The result of VAR revealed that economic growth has a positive and significant impact on international trade in Nigeria and India. Moreover, the causality direction vector is from international trade toward the economic growth in Nigeria and India. The study suggested that the government of the two nations should widen their countries for international trade and develop macroeconomic policies. Surely, the government of the two countries should enhance and accelerate production to generate income and boost the economic growth of their nations. Nevertheless, the abovementioned countries should set a program to attract foreign direct investment and international trade.

Ahmad (2018) explored Bangladesh's relationship between international trade and Gross Domestic Product (GDP). The determinants of international trade are export and import, and the determinant of economic growth is GDP. The study runs the correlation matrix among dependent and independent variables and regression analyses to find the impact of export and import on GDP. The result indicated a strong positive correlation between international trade and GDP. Furthermore, there is a statistically significant and strong positive impact of export and import on the economy of Bangladesh. They suggested that countries should engage in international trade and evinced the importance of international trade for the betterment of the country.

Bouoiyour (2003) sought to find the relationship between Morocco's international trade and economic growth. This paper employed Augmented Dickey-Fuller (ADF) and Philip-Perron tests of the Unit Root Test (URT) to examine the stationarity of the variables. The paper used exports, imports, and gross domestic product as variables. The study used the Vector Error Correction (VEC) method to analyze the nexus between variables from 1960 to 2000. The cointegration and Granger causality test were conducted to analyze the causality and relationship between trade and economic growth in Morocco. The result showed that foreign trade could not be defined as an accelerator for the economic growth of Morocco.

Omoju and Adesanya (2012) sought to explore the impact of international trade on the economic growth in Nigeria over the period from 1980 to 2010. Besides, the study used Economic Growth measured by GDP, Foreign Trade measured by the amount of import and export, foreign investment measured by FDI, government expenditure, and exchange rate variables to find the relationship between variables. The Ordinary Least Square (OLS) regression method was used to test the model. The result approved that international trade has a significant positive impact on the economic growth of Nigeria. Moreover, the study recommends that the government pave the path to attracting Foreign Direct Investment. Besides, the government should develop policies to improve Nigeria's Trade.

Gnoufougou (2013) investigated the causal association between international trade and economic growth from 1982 to 2012 in Togo using correlation and the Multiple Regression Relationship (MRR) to analyze the relationship between international trade and economic growth. The stationarity or the degree of integration was tested through Unit Root Tests (URT). The result of MRR revealed a positive causality among export, import, and gross domestic product. Likewise, the Granger causality test confirmed the bi-directional causality between export and gross domestic product. It means international trade caused economic growth and economic growth caused international trade. This paper suggested that policies toward

enlarging and expanding growth must be developed. Finally, Togo can enlarge its domestic market by boosting international trade.

Afolabi et al. (2017) critically examined the impact of international trade on economic growth in the Nigerian economy. The Ordinary Least Square (OLS) model was run to find the relationship between variables. The OLS result pointed up that interest rate, import, export, and government expenditure have a positive and significant relationship. Thus, the exchange rate and foreign direct investment have a negative and insignificant relationship with the gross domestic product. The study recommended that the Nigerian government may specialize in agriculture to increase the economic growth of Nigeria. They also recommended that government should emphasize exporting non-oil products instead of primary and oil exports. Nevertheless, the intensification of the deregulation policy is essential to provide foreign currency to exporters and investors.

Bakari and Krit (2017) examined the causal nexus between international trade and economic growth using the vector error correction method and the Granger causality test. Furthermore, the log-linear econometrics model was designed to find the correlation between exports, imports, and economic growth. The Vector Error Correction (VEC) was applied to analyze the long-run nexus between imports, exports, and gross domestic product. Moreover, the Granger Causality Test was adopted to discover the causality between variables. The result pointed out a long-term relationship between all variables in Mauritania. Also, the Vector Error Correction model revealed that exports positively impact economic growth. At the same time, imports have a negative impact on economic growth. Likewise, the Granger-Causality test also declared a unidirectional association between imports and gross domestic products. The study suggested that new policies should be developed to encourage investment in Mauritania.

Lawal and Ezeuchenne (2017) examined Nigeria's relationship between international trade and economic growth. This study utilized the Johansen cointegration test and vector error correction model. The study used five variables; Gross Domestic Product (GDP) as the dependent variable, import, export, the balance of trade, and trade openness as independent variables. The result highlighted that export has a significant and positive relationship with GDP, but trade openness, the balance of trade, and imports have a negative relationship with GDP. The study suggested that Nigeria should emphasize exporting finished goods instead of primary goods; as far as the dumping policy is concerned, the government should increase tariff barriers to prevent dumping and introduce new technologies to increase productivity and reduce imports.

Elias et al. (2018) analyzed the impact of international trade on the economic growth in Nigeria using multiple regression analysis techniques. The study found that there is a significant impact of export trade, while there is no significant impact of import trade on Nigerian economic growth. The study recommended that the focus on oil export should be minimized and that non-oil export should be encouraged. Meanwhile, the excessive consumption of foreign goods and services should decrease. Furthermore, domestic manufacturing industries need to improve their goods and services that could find a place in international markets.

Statement of Problem

The problem statement is often used as a starting point for research and analysis to understand the issue and develop potential solutions. This study describes an issue or challenge related to international trade that needs to be addressed or resolved. Furthermore, it serves as a roadmap for the research project, guiding the study's design and methodology and providing a clear focus for the analysis and interpretation of the data.

International trade can be seen as a package for economic growth for most countries, and this flow will lead to job opportunities, social welfare, and an increasing standard of living. However, unfortunately, Afghans and the Afghan economy were in the shadow of war for almost 30 years. These consistent wars isolated Afghanistan from other countries, people lost their hopes, and many Afghans immigrated to different countries; as a result, we left as a consumer and importer country. After 2001, the situation changed dramatically; ODA started to inflow into the economy of Afghanistan, and the world community started engaging with the new government. However, with all mentioned efforts, we still struggle with different issues, including export and import balance sheets. It still needs to be approached how much trade proxies (export and import) contribute to the growth process in Afghanistan.

This topic will be decisive for Afghanistan's business and entrepreneurship because new trade and mega transit projects like Lapis Lazuli, Chabahar, Regional transit under the TIR agreement, and air corridors demands critically tested research on trade, economic growth, trade openness, and related issues to understand the feasibility of investment and trade.

Objectives

The research objectives are to discover solutions to problems by applying scientific methods. Besides, the research objective is to find the hidden truth. Therefore, this study will

work on unscreened points and patterns of international trade (Narula, 2007). Furthermore, this study focuses on the impact of international trade on Economic Growth of Afghanistan. Specifically, its emphasis on achieving the following objectives:

- To analyze the trends in International Trade and Economic Growth in Afghanistan over the study period.
- To study the contribution of export to the GDP in Afghanistan.
- To investigate the impact of imports on the economic growth in Afghanistan.
- To Assess the relationship between import, export, and economic growth in Afghanistan.
- To compare pre-war and post-war trade and economy in Afghanistan.
- To develop effective strategies and appropriate policies for better economic growth in Afghanistan.

Research Methodology

The study utilized the following methods to explain the relationship and impact of trade on economic growth. Besides, the theoretical framework, data sources, period of study, research question, and research hypothesis are explained respectively.

Data

This study used secondary data relating to International Trade and Economic Growth, and the data was retrieved from:

For the first Part:

- GDP 1990-2002 Macrotrends database
- GDP data from 2002 – 2019 is taken from World Bank national accounts data
- FDI 1990-2019 World Bank database
- Export 1990– 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).
- Import 1990 – 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).
- Labor Force participation rate 1990-2019, total (modeled ILO estimate) world bank database
- Gross Fixed Capital Formation 1990-2019 is collected from Knoema Database.

- The author calculates Trade Openness 1990-2019 data using the IMF and World Bank data.

For the second Part:

- GDP data from 1970-1981 and 2002 – 2019 is taken from World Bank national accounts data
- GDP 1982-2002 Macrotrends database
- FDI 1970-2019 World Bank database
- Export 1970 – 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).
- Import 1970 – 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).

For the Third Part:

- Export 1970 – 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).
- Import 1970 – 2019 database of International Financial Statistics (IFS) of International Monetary Fund (IMF).
- GDP data from 1970-1981 and 2002 – 2019 is taken from World Bank national accounts data
- GDP 1982-2002 Macrotrends database

Research Questions

- Is there a causal relationship between Afghanistan's export, import, and economic growth?
- Is there a long-run relationship between proxies of international trade and economic growth in Afghanistan?
- Does export lead to economic growth in Afghanistan?
- Does import stimulate economic growth in Afghanistan?

Research Hypotheses

The study will test and validate the following theoretical hypotheses:

1. H_1: There is a positive impact of exports on Gross Domestic Product (GDP).
2. H_1: There is a positive impact of imports on Gross Domestic Product (GDP).
3. H_1: There is a long-run relationship between export and Gross Domestic Product (GDP).

4. H_1: There is a long-run relationship exists between imports and Gross Domestic Product (GDP).
5. H_1: There is a causal relationship between import, export, and Gross Domestic Product (GDP)

Tools of Analyses

Description and Frequencies of Data

This study will use descriptive statistics to describe the variables and frequencies of the data. Besides, the Mean, Mode, Median (Central Tendency), and Standard Deviation (Dispersion) of all variables will be studied in a standard base of research (Thakur, 2008).

Arithmetic Mean

The ordinary average is the best method to describe a group of scores in a single number. The sum of all the scores is divided by the scores (Aron & Aron, 2002). Arithmetic mean (mean) of n number of data is formulated as

$$\bar{X} = \sum_{i=1}^{n} \frac{xi}{n} \quad , \; i = 1, 2, 3 \ldots\ldots, n1 \tag{1.1}$$

Median

The median refers to the middle value in a data series and can be expressed as one-half of the series and item distribution (Pratibha, Farhat, & Sandeep , 2009).

$$\text{Med.} = \text{Size of } (N+1)/2th \text{ item} \tag{1.2}$$

Mode

Mode is a type of measurement for central tendencies like median, which calculates the frequency distribution of data (Panneerselvam, 2008) and the mode of group data expressed as

$$\text{Mode} = L + \frac{f_1}{f_1 + f_2} \; C \tag{1.3}$$

Standard Deviation

The standard deviation is used in terms of the square root of the variance (Chandra & Sharma, 2013).

$$\delta = \sqrt{\sum_{i=1}^{n} (x_i - \bar{X})^2 \Big/ (n-1)} \tag{1.4}$$

It is the standard deviation of a sample. The standard deviation of the finite population is

$$\sigma = \sqrt{\sum_{i=1}^{n} (x_i - \bar{X})^2 \Big/ n} \tag{1.5}$$

Analysis of Data – Part One

Econometric statistics models call for a final result, make decisions in terms of probabilities, and put the hypothesis to test (Trochim, 2003). These are a few paths to analyze the data under inferential techniques.

Stationarity of Data (Unit Root Tests)

The Augmented Dickey-Fuller (ADF) test of Unit Root Tests (URT) will be applied to find the stationarity of variables. Moreover, to proceed with the Dickey-Fuller test, as in

Y_t as a random walk: $$\Delta Y_t = \delta Y_{t-1} + u_t \quad (1.6)$$

Y_t as a random walk with drift: $$\Delta Y_t = \beta_1 + \delta Y_{t-1} + u_t \quad (1.7)$$

Y_t is a random walk with drift around a deterministic trend:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + u_t \quad (1.8)$$

The error term u_t was believed to be uncorrelated while the u_t is associated and correlated; Dickey and Fuller have formulated another test named the Augmented Dickey-Fuller (ADF) test. Therefore, the test is carried out by adding lagged values of the dependent variable to the three equations mentioned earlier and developing an integrated equation. The ADF test is expressed as the following regression (Gujarati, Porter, & Gunasekar, 2009):

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (1.9)$$

Cointegration and Long-run relationship

Though many time series are non-stationary but still keep running together over the span of time, which indicates that there is a relationship in the long-run, besides, there is a possibility that the cointegrating variable may deviate in the short term, but the relationship would stick back in the long-term (Brooks, 2008).

The Johansen test, named after Soren Johansen, is a method for measuring the cointegration of many, Say k, i(1) time series in statistics (Johansen, 1995). Besides, this test makes more than one cointegrating relationship, so it is more widely applicable than the Engle-Granger test based on the Dickey-Fuller test for Unit Root Test (URT) from a single estimated cointegrating relationship in the residuals (Davidson, 2000).

Johansen's methodology takes its starting point in the vector autoregression (VAR) of order p given by (Hjalmarsson & Osterholm, 2007):

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$$y_t = \mu + A_1 y_{t-1} + \cdots + A_p y_{t-p} + \varepsilon_t \quad (1.10)$$

Where y_t is the nx1 vector of variables integrated of order one – commonly denoted I (1) – and ε_t is the nx1 vector of innovations. This VAR can be reformed as

$$\Delta y_t = \mu + \prod y_{t-1} + \sum_{i=1}^{p-1} \prod_i \Delta y_{i-1} + \varepsilon_t \quad (1.11)$$

And finally,

$$\Pi = \sum_{i=1}^{p} A_i - I \text{ and } ٦_i = \sum_{j=i+1}^{p} A_j \quad (1.12)$$

Causality and Relationship between Variables

The Granger causality test is a statistical hypothesis test to assess if a time series helps predict another; this idea was first proposed in 1969. Regressions typically represent correlations, but Clive Granger argued that causality might be evaluated in economics by testing the ability to predict a time series' future values using previous values from another time series (Granger, 1969). Nevertheless, the Granger Causality Test will be used to extract the causality between export, import, and GDP.

Mathematical Statement

Let Y and X be time series that are stationary. Moreover, to test the null hypothesis that X does not exist Trigger Granger-Y, the good lagging values of Y are the first fount to be included in a univariate autoregression of Y:

$$yt = a_0 + a_1 y_{t-1} + a_2 y_{t-2} + \ldots + a_m y_{t-m} + error_t \quad (1.13)$$

Besides, autoregression is increased by the inclusion of X lagged value.

$$yt = a_0 + a_1 y_{t-1} + a_2 y_{t-2} + \ldots + a_m y_{t-m} + b_p x_{t-p} + \cdots + b_q x_{t-q} + error_t \quad (1.14)$$

Multivariate Analysis

Multivariate causality analysis of Granger is typically performed by fitting the time series with a Vector Autoregressive Model (VAR) (Helmut, 2005):

$$X\ (t) = \sum_{r=1}^{L} A_t X\ (t - r) + \varepsilon\ (t) \tag{1.15}$$

Where $\varepsilon\ (t)$ is Gaussian Random Vector (GRV) and $A_t$is a matrix for every t.

Multiple Regression

The least-square regression line defined the overall linear relationship between two variables and described the prediction numbers on Y from numbers on X; the above-mentioned line was the essential and fitting line to interpret the relationship between variables and is expressed by this formula:

$$Y = a + bX \tag{1.16}$$

Furthermore, the least-square regression line can be developed and extended to include all influential and related independent variables, called multiple regression (Healey, 2018). The least-square multiple regression equation is

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 ..... \tag{1.17}$$

Moreover, when there are two or more independent variables, it is known as multiple regression. To clarify better, we consider only two independent variables and one dependent variable. In this case, the multiple regression equation turns to

$$Y = a + b_1X_1 + b_2X_2 \tag{1.18}$$

Where X_1 and X_2 are two independent variables and Y is the only dependent variable. That can express as

$$\sum Y_i = na + b_1 \sum X_{1i} + b_2 \sum X_{2i} \tag{1.19}$$

$$\sum X_{1i}Y_i = a\sum X_{1i} + b_1 \sum X_{1i}^2 + b_2 \sum X_{1i}X_{2i} \tag{1.20}$$

$$\sum X_{2i}Y_i = a\sum X_{2i} + b_1 \sum X_{1i}X_{2i} + b_2 \sum X_{2i}^2 \tag{1.21}$$

The (b_1, b_2 …) are the regression coefficients and indicate the degree of correlation between the variables (X_1, X_2, …).

Ordinary Least Square (OLS) Specification

OLS is unbiased that has a variance that is inversely proportional to n. besides, when the sample size is large, it has the capacity of normal sampling distribution (Stock & Watson, 2018). Therefore, this study utilized the Ordinary Least Square (OLS) method to analyze the impact of international trade on economic growth.

The model to run the test is as follows:

Economic Growth (GDP) = f(Export, Import, FDI)

The Ordinary Least Square regression equation can be presented as:

$$Y = \alpha + \beta_1 Exp + \beta_2 Imp + \beta_3 FDI + e \qquad (1.22)$$

The above-developed model states that Gross Domestic Product (GDP) is the dependent variable, and Export, Import, and FDI are independent variables.

Dependent Variable

Gross Domestic Product (GDP): The study used GDP as the proxy of economic growth, which was considered a dependent variable and showed as (Y) in the regression formula. Afghanistan's GDP ascended from 2002 onward; in 2002, the GDP was 4 billion dollars, followed by an increase in 2009 to 12 billion dollars. According to the latest trends, the GDP of Afghanistan rose to 19 billion dollars in 2018.

Independent Variables

Export and Import: The study used imports and exports as proxies of international trade and utilized them as independent variables, which showed by Import (Imp) and Export (Exp), respectively, in the formula. Afghanistan's export and import trends stood at 0.9 billion dollars for imported goods and services and 0.1 billion dollars for exported goods and services in 2002. Besides, the import and export figure rose to 3.3 billion dollars and 0.4 billion dollars, respectively, in 2009. also, in 2018, the trends evinced 7.4 billion dollars in imported goods and services and 0.8 billion dollars in exported goods and services.

Labor Force: The study used the human capital parameter labor force as an independent factor in the model mentioned earlier to cover all aspects of growth in Afghanistan.

Trade Openness: trade openness is measured as a sum of the export and import of the country as a share of the country's GDP (Exp + Imp/GDP). Trade Openness is used as an independent variable and depicted as (openness) in the developed formula of regression. The data from Afghanistan's trade openness illustrated that in 2002 trade openness stood at 103 percent, while the figure changed in 2009 to 89 percent. Likewise, in 2018, the figure was 42 percent normalized by GDP (TheGlobalEconomy, 2020).

Analysis of Data – Part Two

Autoregressive Distributed Lag (ARDL) Model

ARDL is made of two essential parts AR and DL; AR or Autoregressive and DL or Distributed Lag define the cointegration, long-run and short-run coefficient, and long-run adjustment (Error Correction Form).

Autoregressive (AR): Independent variables in a regressive model are all lag variables of the dependent variable. It denotes the absence of any other independent variables.

$$C_t = a + B_1 C_{t-1} + B_2 C_{t-2} \dots + u_t \quad (1.23)$$

In equation (4.1.4), C_t shows the current consumption. Where the independent variables C_{t-1} shows last year's consumption and C_{t-2} shows the consumption of two years ago.

Distributed Lag (DL): when the same independent variable occurs in a regression many times with specific time lags, it is known as the distributed lag model because the impact of the independent variable is scattered across various periods.

$$C_t = a + B_1 Inc_t + B_2 Inc_{t-1} + B_3 Inc_{t-2} \dots + e_t \quad (1.24)$$

In this equation, 'Inc' is income, C is consumption, and the income variable is spread across three-time lags. It denotes that the consumption depends on current income, last year's income, and two years back income.

ARDL Model: this model is a mixture of AR and DL, and the model design is as follows:

$$C_t = a + B_1 C_{t-1} + B_2 C_{t-2} + B_1 Inc_t + B_2 Inc_{t-1} + B_3 Inc_{t-2} + \varepsilon_t \quad (1.25)$$

The study should discover Vector Autoregressive (VAR) Lag Order Criteria and develop the model under the bound test for long-run cointegration.

Analysis of Data – Part Three

t-test Statistics

The means of two independent groups of samples are compared using the independent (or unpaired two-sample) t-test.

The formula for The Independent samples t-test, abbreviated t, is as follows:

$$t = \frac{m_A - m_B}{\sqrt{\frac{S^2}{n_A} + \frac{S^2}{n_B}}} \quad (1.26)$$

The study finds S^2 or common variance of the two groups through:

$$S^2 = \frac{\sum(x - m_A)^2 + \sum(x - m_B)^2}{n_A + n_B - 2} \quad (1.27)$$

Where;

$A\ and\ B$= are two groups to be compared

n = number of observations

m= is the means of groups A and B

The estimated t value is then compared to the crucial t value from the t distribution table with a degree of freedom (nA + nB – 2) for a 95 percent confidence level. If the estimated t value is greater than the crucial t value, the null hypothesis is rejected (and concluded that the means are significantly different).

Before running the Independent Sample t-test, there are some criteria to be fulfilled;

1. Assumption of independence and being on a continuous scale.
2. The data should be taken through a random sampling method; because the data is in a time series structure, the study takes the population instead of the sample.
3. Assumption of normality.
4. Assumption of variance homogeneity.

Major Findings

Part one

- The study selected the ARDL because there was a mixture of data; some were stationary at the level, and few were stationary at the first difference. Furthermore, to investigate the impact of trade on economic growth using the ARDL model. Nevertheless, before the ARDL test, the study should select the Lag Order Criteria and find cointegration between variables using a long-run and bound test of ARDL.
- The study defined the optimum lag length based on the lowest value of lag length. Therefore, SC Criterion, LR Criterion, Akaike information criterion, HQ Criterion, and FPE selected lag2. So, lag2 is a considerable lag length, and Akaike Criterion is desirable for running the model.
- The ARDL Cointegration or Bounds test reported a long-run relationship among variables.

- There is a mixture of data based on the stationarity of data, lag length has been selected, and there is a Bound test among variables, so the considerable model to find the impact of trade on economic growth is the ARDL coefficient.
- The long-run result evinces that international trade in the forms of Import (I) and Export (E) has a significant positive impact on economic growth at a 5 percent significance level. More precisely, one unit increase in international trade in export would lead to a (0.1) unit increase in economic growth. Moreover, one unit increase in imports would lead to a (0.9) unit increase in economic growth in Afghanistan. Conversely, Trade Openness (T) significantly negatively impacts economic growth at a 5 percent significant level.
- The short-run result discloses that export and import have a significant and positive impact on economic growth while Trade Openness (T) has a significant but negative impact on economic growth in Afghanistan at a 5 percent significant level in the short-run period. Nevertheless, the ECT coefficient (-1.86) shows the long-run relationship among variables and indicates that the variable's approach to equilibrium is being adjusted at 52.3 percent.
- R-Squared and Adjusted R-Square are statistical metrics in a regression model that determines how much of the variation in the dependent variable can be explained by the independent variable. To put it another way, r-squared indicates how well the data match the regression model (the goodness of fit). So, from Table 10, the Adjusted R-Square is 99 percent, which evinces that the model is fit and the dependent variable is well-explained by the independent variables. Furthermore, Adjusted R-Square, Durbin-Watson Statistics, and F-Statistics support the above statement that the model is a good fit.

Part Two

- The study analyses the Impact of International Trade on the Economic Growth of Afghanistan. The data is in time series form. Therefore, the variables; Gross Domestic Product, Export, Import, and Foreign Direct Investment were put to the stability properties or stationary test using Augmented Dickey-Fuller (ADF) and Pillips and Perron (PP) test at levels to assure that whether the variables are ready to be run directly or it should be taken the first difference. The results declared that all variables

are not stationary at this level. After the first difference, the variables turn stationary at a 5 percent significance level.

- The study selects lag based on the lowest value of lag length. Therefore, SC Criterion, LR Criterion, Akaike information criterion, HQ Criterion, and FPE selected lag1. So, lag1 is a considerable lag length, and Akaike Criterion is desirable for running the model.
- Trace test of Johansen cointegration test compiled one cointegrating equation at a 5 percent significance level. The test underlined whether the p-value (**Mackinnon-Haug-Michelis (1999) p-value) is less than 0.05; the study rejects the null hypothesis. The Max-Eigen statistics can clarify further. So, it will be focused on Max-Eigen statistics. Johansen's statistics of the cointegration test reveal that there is one cointegrating equation.
- Moreover, the study considers trace statistics at a 5 percent significance level; trace statistics reveal that tabulated p-values are more than 0.05. therefore, the study rejects the null hypothesis and accepts alternative hypotheses. This states a long relationship exists between Afghanistan's international trade and economic growth.
- The Granger Causality results for each pair of variables; FDI and Import show bidirectional causality at a 5 percent significance level, GDP stimulates the export but fails to accept vice versa, Import and Foreign Direct Investment (FDI) led to GDP at a 5 percent level of significance. Nevertheless, import helps export at the above-mentioned significance level.
- The regression equation results defined the impact of international trade proxies, which are imports and export, on the economic growth proxy, which is the gross domestic product in Afghanistan. The result highlighted that international import and export trade significantly impacts economic growth at a 5 percent significance level. More precisely, one unit increase in international trade in export would lead to a (0.16) unit increase in economic growth. Moreover, one unit increase in imports would lead to a (0.55) unit increase in economic growth in Afghanistan at a 5 percent significance level.

Part Three

- The null hypothesis stated that the mean difference in export before and after the war was zero. So, the Significance value or P-value is 0.125, which is more than the 0.05

significance level. The final decision is to accept the null hypothesis and summarize that there is no difference between pre-war and post-war exports.

- Meanwhile, there is a huge difference in pre-, and post-war Import and trade openness Because the P-value for the variables mentioned earlier is 0.000, which is less than the 0.05 significance level. So, the study rejects the null hypothesis, accepts the alternative hypothesis, and concludes that there is a significant difference between pre-war import and post-war import, and pre-war trade openness and post-war trade openness.

Policy Suggestions

Countries with a large balance of trade gap, like Afghanistan, meaning it imports more than it exports, may adopt various trade policies to reduce the gap and improve their trade balance.

Afghanistan has been working to develop its trade policies in recent years. The Afghan government has been seeking to improve trade relations with other countries and integrate into regional and global trade networks. Afghanistan has been pursuing various trade agreements and joining international trade organizations to achieve this.

Some of the key agreements that Afghanistan has pursued include:

- Afghanistan-Pakistan Transit Trade Agreement (APTTA): This agreement facilitates trade between Afghanistan and Pakistan by providing transit rights and simplified customs procedures.
- Afghanistan-Central Asia Regional Economic Cooperation (CAREC) program: This program aims to promote regional trade and economic cooperation among Afghanistan and its neighbors in Central Asia.
- Bilateral trade agreements: Afghanistan has also signed several bilateral trade agreements with countries such as India, Iran, China, and Turkey to increase trade and investment flows.

Some of the key trade policies that Afghanistan should implement include:

1. Exchange rate policy: Adjusting the exchange rate to make exports cheaper and imports more expensive, thereby increasing exports and reducing imports.
2. Tariffs and Quotas: Imposing tariffs or quotas on imported goods to make them more expensive, reducing demand, and increasing the competitiveness of domestic goods.

3. Substitute imports: Afghanistan loses a large amount of financial capital due to its import from different countries. A very rational decision would be the implementation of an import substitution policy. This policy will help Afghanistan to balance the export and import volume, create jobs, build capacities, and boost economic growth in Afghanistan.
4. Promoting exports: Providing financial and non-financial support to domestic firms to help them increase exports, such as through export promotion programs, trade missions, and trade fairs.
5. Encouraging foreign investment: Attracting foreign investment to the country to increase production and exports, improve technology and skills, and create jobs.
6. Diversifying exports: Encouraging firms to diversify their exports into new markets and product lines to reduce dependence on a few countries or products.
7. Improving domestic competitiveness: Providing support for research and development, innovation, and education to improve the competitiveness of domestic firms and industries.
8. Market Access: Afghanistan faces challenges in accessing markets, especially in developed countries. It should work closely with the international community to access international and regional markets by creating duty-free, quota-free markets for LDC exports.
9. Technical support and capacity-building initiatives are designed to assist LDCs in enhancing their trade-related capabilities and enhancing their participation in the global economy.
10. Afghanistan imposes many taxes (toll levied by the ministry of transport, service tax levied by Afghanistan Road Authority, road pass levied by the ministry of foreign affairs, weigh motion charges by the ministry of finance, Etc.) while these charges can be integrated under one term.

Chapter Scheme

The study is designed into five following chapters:

Chapter – 1: Introduction

This chapter will provide a brief overview of the background of international trade and economic growth. Besides, it includes:

- The importance of research.
- Statement of Problem.
- Objectives of the study.
- Hypotheses of the research.
- Methodology and tools of the study.
- The chapter scheme will also be illustrated in this chapter.

Chapter – 2: Review of Literature

An extensive literature review will be carried out in this chapter. The study classified literature into theories and evidence. There are seven most important theories of international trade; the Absolute Advantage theory of Adam Smith, the Comparative Advantage theory of David Ricardo, the Opportunity Cost theory of Gottfried Haberler, the modern theory of international trade by Heckscher-Ohlin, the new trade theory of Paul Krugman and free trade theories. The study subdivided evidence into three experiences; Afghanistan's experiences, Regional experiences; Asian Cooperation Dialogue (ACD), Economic Cooperation Organization (ECO), South Asian Association for Regional Cooperation (SAARC), and Organization of Islamic Cooperation (OIC), and International experiences.

Chapter – 3: Country's Trade Profile

This chapter will encompass the country's Trade profile, Trends, Direction and statistics on international trade and economic growth.

Chapter – 4: Analysis & Discussion

The layout of this chapter will provide an empirical discussion and analysis of the impact of international trade on economic growth, the causal relationship between variables, and the long-run relationship between proxies of international trade and economic growth. Besides, the explanation of different econometric models is provided, along with their interpretations.

Chapter – 5: Findings, suggestions, and Conclusions

This chapter will provide a summary of research findings, suggestions, and concluding remarks based on the objectives framed in this thesis. The major implications of the study and potential areas for future research will also be discussed in the final chapter of the thesis.

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Published Scientific Papers

1. Published a paper on **"Impact of Trade on Economic Growth in Afghanistan"** in Arian Quarterly Journal of Scientific Research, Volume III, Issue VIII & IX, 2020.
2. Ashrafi, S. A. R., & Kalaiah, V. (2021). **Trend, Direction and Performance of Afghanistan's International Trade.** Australian Finance & Banking Review, 5(1), 54-63.

Presented Scientific Papers in National and International Conferences

3. Presented a paper on "**Analyzing the Nexus between Foreign Trade, Human Capital and Economic Growth in Afghanistan**" in the Two-Day National level Conference on "Digital India: Progress, New Initiatives and Challenges" held at the Department of Studies in Commerce, Mangalore University, Mangalagangothri, Karnataka on 24th and 25th June 2022.
4. Presented a paper on "**Impact of International Trade and Human Capital on Economic Growth**" in a Two-Day International Conference on "Changing Landscapes in Business, Finance and Economy: A Global Perspective" organized by the Department of Commerce in Collaboration with IQAC Sidho-Kanho-Brisha University, Purulia, West Bengal, India held during November 28-29, 2020.
5. Presented a paper on "**Afghanistan Trade at a Glance: An Extensive Study on Direction of Afghanistan's Trade**" in a Two-Day International Virtual Conference on "Retrospect and Prospect of MSMEs in post covid-19" Organized by the School of Resource Management, Kalinga Institute of Social Sciences (KISS) Deemed to be University on 25th – 26th June 2020.
6. Presented a paper titled "**Performance and Trend of Afghanistan's Foreign Trade**" in the Two-day National Conference on "Rethinking of Indian Development Experience" on 12th and 13th March 2020, Organized by the Department of Post Graduate Studies and Research in Economics, Mangalore University, Mangalagangothri.

Participation in National and International Conferences

7. Participated in the Two-Day National level Conference on "Digital India: Progress, New Initiatives and Challenges" held at the Department of Studies in Commerce, Mangalore University, Mangalagangothri, Karnataka, on 24th and 25th June 2022.
8. Participated in the National Conclave on "Emerging Issues in Financial Markets during the Post-covid era: The Indian Experience" Organized by Institute for Policy Research in Economics, management, and social development, Odisha, on 22nd May 2022.
9. Participated in the International Conference on "Indian Economy: Issues & Challenges (2014-2021) organized by Annasaheb Gundewar College on dated 26th Oct 2021.
10. Participated in the International Virtual Conference 2021 on "Post-covid Global Scenario: Threats and Opportunities" organized by the Department of Commerce and Management Studies, St. Joseph's College in collaboration with Graduate Business, Christian Brothers University, USA on 27th – 29th of January 2021.
11. Participated in Two-Day International Conference on "Changing Landscapes in Business, Finance and Economy: A Global Prospective" organized by Department of Commerce in Collaboration with IQAC Sidho-Kanho-Brisha University, Purulia, West Bengal, India held during November 28-29, 2020.
12. Participated One Day National Multidisciplinary Conference on "Covid-19 and Migration" held by People's Education Society's Milind College of Arts on 05 July, 2020.
13. Participated in Two-Day International Virtual Conference on "Retrospect and Prospect of MSMEs in post covid-19" Organized by the School of Resource Management, Kalinga Institute of Social Sciences (KISS) Deemed to be University on 25th – 26th June, 2020.
14. Participated in the Two-day National Conference on "Rethinking of Indian Development Experience" on 12th and 13th March 2020, Organized by the Department of Post Graduate Studies and Research in Economics, Mangalore University, Mangalagangothri.

Symposiums, Workshops, Webinars, and Seminars

15. Participated the National Webinar on "Behavioral Economics" Organized by E2S Club, Department of Business Administration on 26th April 2022.
16. Participated one day state level webinar on E-resources and N-list organized by central library, Bharatiya Mahavidyalaya conducted on 6th April 2022.

17. Participated in one week workshop on Research Methodology in Social Sciences; Blending Theories with Practical organized by MBA – Tourism and Travel Management, Department of Business Administration, Mangalagangothri on 2 – 7 March 2022.
18. Attended the National Webinar entitled "Research Methodology in Social Sciences" organized by the Department of Studies in Economic and Cooperation, the University of Mysore, on 18th March 2021.
19. Participated in the one-day State level Webinar on "Economic Nationalism of India" organized by the Department of Economics of SMT. Narsamma Arts. Commerce and Science College on 25th February 2021.
20. Participated in One-Day National Level Webinar on "Useful e-Resources and Academic Integrity" Organized by the Library, Knowledge and Resource Center of Shrimati Narsamma Arts, Commerce and Science College on 23rd February 2021.
21. Attended One Day National Webinar on "Intellectual Property Rights, Writing Thesis, Dissertation, Research Paper as per New Norms" Organized by Workshop/Seminar/Conference Organizing Committee and Internal Quality Assurance Cell on 12th February 2021.
22. Participated in the National Webinar on "Recent Policy Responses to Financial Market" organized jointly by IPREMS Berhampur and Shiksha College Berhambur on 6th February 2021.
23. Participated in the National Webinar on "Research Paper Writing and Publications" Organized by the Internal Quality Assurance Cell and Commerce and Management Association on 6th February 2021.
24. Attended One Day Webinar entitled "Research and Publication Strategy for an Academic Career on 5th February 2021 organized by P.G. Department of Commerce, Christ College.
25. Participated in One Day National Webinar on "Research Methodology in Social Sciences" organized by the Department of Economics, Government First Grade College on 5th February 2021.
26. Attended the National Webinar entitled "Law and Economics" organized by the Department of Studies in Economics and Cooperation, University of Mysore, Manasagangotri on 29th January 2021.
27. Participated in the National Webinar on "Art of Writing and Publishing Research Papers" held by Rajagiri College of Management and Applied Science on 21st and 22nd January 2021.
28. Participated in the International Webinar on "Crisis of Security Challenges: A Global Concern" Focused on concerns about economic dimensions, organized by Tuljaram Chaturchand College of Arts, Science & Commerce, Pune, on 15th and 16th January 2021.
29. Attended the National Webinar on "Different Aspects of Marxism" Organized by FARAK on 12th December 2020.

30. Participated in the International Symposium on "Trade, Commerce, Bilateral Relationship and Opportunities between India and Malaysia" held by Bharati Vidyapeeth's Institute of Management Studies and Research on 4th December 2020.
31. Attended the National Level Webinar on "Scholarly Writing and Publishing: Strategies to Enhance Research Visibility and Impact" held by the Department of Collegiate Education and Technical Education on 27th August 2020.
32. Participated in 5 Day International Webinar on "Impact of COVID-19 Pandemic on Education, Economic Situation, Political and Socio-Cultural Scenario" Organized by Acharya Jagadish Chandra Bose College on July 21, 2020.
33. Participated in the One Day National Webinar on "Social Economic Revival for a Better New World" Held by the Department of Economics and Punjabi, S.D. Kanya Mahavidyala on 20st July 2020.
34. Participated in National Level Webinar on "International Relations of India with Neighboring Countries" Organized by Milind College of Arts, People's Education Society on 19 July 2020.
35. Attended a training course entitled "From Idea to Market: A Journey Towards Commercialization" held on July 9, 2020, by the Deanship of Scientific Research, Malik Khalid University, Kingdom of Saudi Arabia.
36. Participated in International Webinar on "Covid-19: Challenges Faced by Business Environment and the Way Forward" held by Guru Nanak College Killianwali on 7th July 2020.
37. Participated in the National Webinar on "An Insight into Capital Market During Covid-19 Pandemic" organized by the Department of Business Administration SDM College of Business Management on 02 July 2020.
38. Participated in the National Webinar on "An Insight into Capital Market During COVID Pandemic" Organized by the Department of Business Administration of SDM College of Business Management on 02 July 2020.
39. Attended the seven days National level Experiential Workshop on Research Methodology organized by St. Joseph's College of Commerce on 03-09 December 2019.

Statistics, Econometrics, Data Management, Analysis and Interpretation Sessions

40. Participated in One-Week Faculty Development Program on "Advanced Time Series Analysis" Organized by the School of Business Studies, Sharda University, from 8th to 13th March 2021.
41. Participated in a One-Day National Webinar on "MS Office: A Teaching Tool" Organized by the Department of Commerce, Adarsh Art and Commerce College, and Internal Quality Assurance Cell on 18th February 2021.

42. Participated in One-Week National Level Workshop on the topic “Basic Econometrics,” which was conducted by Government First Grade College Saligrama, from 25th January to 31st January 2021.
43. Attended the “Hands-on Training on Data Analysis Using Excel” organized by Institute for Policy Research in Economic, Management, and Social Development (IPREMS) on 5th December 2020.
44. Participated in a Two-day Workshop on “Application of Mendeley in Research” organized by the Institute for Policy Research in Economic, Management, and Social Development on 30th – 31th, August 2020.
45. Completed “Econometrics#1: Regression Modeling, Statistics with EViews” Course on April 8, 2020, held by Avinash Data and Coding.
46. Completed the “Data Management & Statistical Analysis Using IBM SPSS 25 Training” organized by Smart Afghan International Training and Consultancy on December 27, 2018.